



## Rare Earth Catalysis: From Synthesis to Sustainable Applications

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### Message from the Guest Editors

This Special Issue is devoted to the synthesis of rare earth catalysts and their applications in such sustainable fields as environment protection, energy generation, and the production of chemicals. The main attention will be focused on comprehensive experimental studies of synthesis, characterization, and evaluation of catalyst performance in areas such as, but not limited to, CO oxidation, NO reduction, N<sub>2</sub>O decomposition, NH<sub>3</sub> partial oxidation, NH<sub>3</sub> synthesis, NH<sub>3</sub> decomposition, water–gas–shift (WGS), CH<sub>4</sub> conversion, CO<sub>2</sub> reduction, hydrogen evolution reaction (HER), and oxygen reduction reaction (ORR). The proposed topics include, but are not limited to, the following:

- Preparation of rare earth catalysts;
- Characterization of rare earth catalysts;
- Rare earth catalysis in environment protection (CO oxidation, NO reduction, VOCs elimination and et al.);
- Rare earth catalysis in energy generation (CO<sub>2</sub> reduction, H<sub>2</sub> generation);
- Rare earth catalysis for chemicals production.

